

REMARKS

In the Office Action, claim 18 was rejected under 35 U.S.C. 112. The claim has been amended to recite a linear portion as suggested by the Examiner, thereby overcoming the rejection. Claims 2-7, 9, 11, 13, 14, 16, 18, 21 and 22 were rejected under 35 U.S.C. 103(a) as being unpatentable over Bosma et al. (U.S. Patent No. 6,443,972) in view of Van der Burg, et al (U.S. Patent No. 6,994,092). Claims 8, 15 and 17 were rejected under 35 U.S.C. 103(a) as being unpatentable over Bosma in view of Van der Burg, et al and in further view of Gilson, et al (U.S. Publication 2002/0058911).

Applicants submit that the Examiner still fails to appreciate the claimed structure of the present invention. In the Examiner's marked up diagram of Van der Burg, the Examiner points to a central area of the tubular portion and labels it the "distalmost end". This is incorrect. The distalmost end means the most distal, and identifying a region proximal to the most distal end is incorrect. To facilitate the Examiner's understanding, attached is a marked up Figure 5 of Applicants' drawings and a marked up Figure 35 of the Van der Burg reference. As can be appreciated, the Van der Burg patent is deficient for several reasons.

First, Van der Burg lacks a proximalmost end point of a proximal tubular portion distal of proximalmost end points of struts of the mounting section. In Van der Burg, the structure is the opposite as the proximalmost end point of the tubular portion is proximal of at least some of proximalmost end points of the mounting section.

Second, Van der Burg lacks a distalmost end point of a distal tubular portion proximal of distalmost end points of struts of the mounting section. In Van der Burg, the structure is the opposite as the distalmost end point of the tubular portion is distal of at least some of distalmost ends of the mounting section.

Third, Van der Burg lacks the linear portions of the mounting sections extending axially and radially inwardly. Most of the sections of Van der Burg are curved inwardly.

Fourth, Van der Burg lacks the proximalmost and distalmost end points of the tubular portions axially aligned with a region of the linear portion (claims 18 and 21). Van der Burg lacks the linear regions as noted above. Further, even if the Examiner wishes to identify the inwardly curved portions as linear, they are not axially aligned with the proximalmost end point of the proximal tubular portion and are not axially aligned with a distalmost end point of the distal tubular

portion, but are axially spaced therefrom. As can be seen in marked up Figure 35, the distalmost end point of the distal tubular portion is not axially aligned, but clearly distal of any such portion and the proximalmost end point of the proximal tubular portion is not axially aligned but clearly proximal of such portion.

Independent claims 18, 21 and 22 clearly distinguish over the prior art.

Claim 18 recites inter alia a method of implanting a vessel filter in a patient's body to direct particles to the center of the filter while enabling blood flow through the filter comprising the steps of providing a vessel filter having a plurality of struts defining a mounting section and first and second filtering sections each terminating in a converging end region into a respective first proximal and second distal tubular portion. The plurality of struts extend substantially parallel to the longitudinal axis to engage a vessel wall and curve inwardly and include a linear portion extending radially and axially inwardly to the respective filtering section. The method also recites the step of deploying the vessel filter so the proximalmost end point of the first proximal tubular portion and the distalmost end point of the second distal tubular portion are axially aligned with respective linear portions and are closer to the center of the longitudinal axis of the filter than respective proximalmost and distalmost end points of each of the struts of the mounting section to direct particles along a linear path at an angle to the longitudinal axis toward the center of the filter in the path of greater blood flow through the filter.

Claim 21 recites inter alia a vessel filter wherein in a vessel placement position of the filter, a distalmost end point of the distal tubular portion is radially inward and proximal of the distalmost end points of the struts of the first mounting section and a proximalmost end point of the proximal tubular portion is radially inward and distal of the proximalmost end points of the plurality of struts of the second mounting section. The portion joining the first mounting section and first filter section and joining the second mounting section and second filter section include a linear portion extending radially and axially inwardly and extending from a first curved portion at one end to a second curved portion at an opposing end, the linear portion having a length greater than a length of each of the first and second curved portions. The proximalmost end point of the proximal tubular portion and the distalmost end point of the distal tubular portion are axially aligned with a region of the linear portions of the respective second filter section and first filter section.

Claim 22 recites inter alia a vessel filter wherein the struts extend from the first end point and from the second end point radially inwardly towards the center point of the filter to form first and second filtering sections terminating in first and second tubular portions. The radially inwardly extending struts having a linear portion extending from a first curved portion at a first end and transitioning to a second curved portion at a second end. In the second configuration, the proximalmost end points of the struts in the mounting section are proximal of the proximalmost end point of the first tubular portion and the distalmost end points of the struts in the mounting section are distal of the distalmost end point of the second tubular portion to direct particles along the linear portion of the struts to the center of the filter and toward the central longitudinal axis in the path of greater blood flow through the filter.

As explained in the previous response, the axially inward sections of Applicants' claimed invention direct particles to the center through both ends, regardless of the orientation/direction of implantation. Bosma's structure, where the filter is axially outward, would direct at one end particles away from the center.

The Examiner's combination of Bosma with Van der Burg is untenable. The Examiner is contending that it would have been obvious to one of ordinary skill to modify Bosma to replace it with structure from an occluding device which not only performs a different function but has structure which would function opposite to its structure. The Examiner, other than by the use of impermissible hindsight, is suggesting a modification to a patent (Bosma) with structure to direct particles outward with structure to direct particles in the opposite direction. This modification is counter to Bosma's teachings and without proper basis.

Further, assuming solely for the sake of argument the patents were combined as the Examiner suggests, the recitation of the claims would still not be met for the reasons expounded above. Van der Burg fails to cure the deficiencies of Bosma as it lacks the linear portion and tubular portion locations discussed above, therefore failing to satisfy the structural recitations of the claims. Gilson also fails to cure the deficiencies.

The claims as presented are directed to the Applicants' invention which advantageously directs particles to the center of the filter, with the two filter sections being positioned axially inwardly of the end points of the mounting section. Thus particles will be directed along the angled portions, which angle inwardly so the filtering portions are spaced axially inwardly from the mounting section end points. Further, the claims as presented recite that the sections that extend radially inwardly include a linear portion. This advantageously provides an elongated path of

travel for the clots, enabling them to be moved toward the center. Bosma fails to provide such structure. The Van der Burg patent also fails to provide such structure. As explained on page 10 of Applicants' specification, the greater the distance between V1 and V2 (see Figure 5), the greater the angle of the angled portion, and the more the particles will be directed to the center of the filter in the area of greater blood flow to better dissolve the particles.

The Van der Burg patent does not have such feature since it is an occlusion device, not a filter device. As pointed out previously, the Van der Burg patent is directed to a method of occluding a left atrial appendage.

The Van der Burg patent, being an occluder is designed to provide a barrier or wall. That is, a wall is formed in the curved sections defining a plane. In contrast, the filter of the present application has linear portions to direct and capture clot, more in a bowl like fashion as the particles travel along the linear path. Thus, Van de Berg does not teach or suggest this feature. Consequently, even if Bosma and Van der Burg were combined as the Examiner suggests, the recitations of claims 18, 21 and 22 would still not be met.

Claims 2-9 and 11 depend from claim 21 and claims 13-17 depend from claim 22 and are therefore believed patentable for at least the same reasons that claims 21 and 22 are believed patentable.

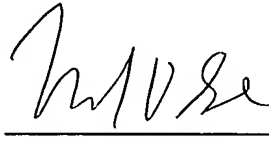
A Replacement Sheet of drawings incorporating the previous changes to Figure 5 is enclosed as requested by the Examiner.

Applicants submit that the finality of the Office Action is improper and should be withdrawn. Applicants filed an amendment with the RCE amending claim 18 to include inter alia a linear portion and adding new claims 21 and 22. Applicants simply do not understand how the Examiner can support his contention that the same invention was being claimed. Reconsideration and withdrawal of the finality of the rejection is requested and entry of the forgoing amendments is requested.

Applicants respectfully submit that this application is now in condition for allowance. Prompt and favorable reconsideration of the present application is respectfully requested. The Examiner is invited to contact the undersigned should the Examiner believe it would expedite prosecution.

Respectfully submitted,

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